WHAT IS CLAIMED IS:

1. An apparatus for thermally treating at least one intervertebral disc, comprising:

(a) an energy application head having an energy application region and a tissue protecting region;

(b) a circumferencial intersection between said energy application region and said tissue protecting region;

(c) at least part of said circumferencial intersection being a thin insertion edge;

(d) said tissue protecting region being sloped from said thin insertion edge to a thick region for lifting vulnerable tissues away from a site of energy application to said at least one intervertebral disc; and

(e) a control member operationally connected to said energy application head, said control member suitable for controlling said energy application head during treatment of said at least one intervertebral disc.

2. The apparatus of claim 1, wherein said energy application head is wedge-shaped.

3. The apparatus of claim 1, wherein said tissue protecting region has a domed center.

4. The apparatus of claim 1, wherein said energy application region has a smooth surface suitable for gliding over surfaces of an annulus fibrosis without snagging other tissues.

5. The apparatus of claim 1, said energy application head further comprising at least one instrument selected from the group consisting of:

(a) a temperature measuring instrument;

(b) a tissue visualizing instrument

(c) an energy measuring instrument;

(d) a distance measuring instrument;

(e) an area measuring instrument;

(f) a pressure measuring instrument; and

(g) a volume measuring instrument.

6. The apparatus of claim 1, said energy application head further comprising at least one energy applicator selected from the group consisting of:

(a) a laser;

(b) a fiber-optic strand;

(c) a lens;

(d) an electrode;

(e) a wire;

(f) a light bulb;

(g) a heating element; and

(h) an ultrasound transducer.

7. The apparatus of claim 1, wherein said energy application head applies energy selected from the group consisting of:

(a) electric current;

(b) radio frequency waves;

(c) microwaves;

(d) infrared waves;

(e) visible light waves;

(f) ultraviolet waves;

(g) ultrasonic sound waves; and

(h) conductive thermal energy.

8. The apparatus of claim 7, said energy further comprising energy in a form selected from the group consisting of:

(a) incoherent electromagnetic radiation;

(b) defocused laser energy; and

(c) collimated laser energy.

9. The apparatus of claim 1, said tissue protecting region further comprising at least one thermal protector for protecting vulnerable tissues from energy applied by said energy application head.

10. The apparatus of claim 9, wherein said at least one thermal protector is selected from the group consisting of:

(a) at least one layer of insulation;

(b) airflow coolant;

(c) liquid coolant;

(d) coolant from a refrigeration system;

(e) a thermocouple; and

(f) a heat-pipe.

11. The apparatus of claim 1, said control member further comprising at least one member selected from the group consisting of:

(a) a wire;

(b) a fiber-optic strand;

(c) one or more hollow tubes;

(d) a radio control mechanism;

(e) a moving mechanical link; and

(f) a beam of light;

(g) a lumen for adding and removing instruments;

(h) a lumen for adding and removing tissue; and

(i) a lumen for irrigating.

12. An apparatus for thermally treating at least one intervertebral disc, comprising:

(a) an energy application head having an energy application region and a tissue protecting region;

(b) a thin insertion edge formed at the anterior portion of a circumferencial intersection between said energy application region and said tissue protecting region;

(c) said tissue protecting region being sloped from said thin insertion edge to a thick region for lifting vulnerable tissues away from a site of energy application to said at least one intervertebral disc; and

(d) a control member operationally connected to said energy application head, said control member suitable for controlling said energy application head during treatment of said at least one intervertebral disc.

13. The apparatus of claim 12, wherein said energy application head is wedge-shaped.

14. The apparatus of claim 12, wherein said tissue protecting region has a domed center.

15. The apparatus of claim 12, wherein said energy application region has a smooth surface suitable for gliding over surfaces of an annulus fibrosis without snagging other tissues.

16. An apparatus for thermally treating at least one intervertebral disc, comprising:

(a) an energy application head having an energy application region and a tissue protecting region;

(b) a thin insertion edge formed at the anterior portion of a circumferencial intersection between said energy application region and said tissue protecting region;

(c) said tissue protecting region being sloped from said thin insertion edge to a thick region for lifting vulnerable tissues away from a site of energy application to said at least one intervertebral disc.

17. The apparatus of claim 16, wherein said energy application head is wedge-shaped.

18. The apparatus of claim 16, wherein said tissue protecting region has a domed center.

19. The apparatus of claim 16, wherein said energy application region has a smooth surface suitable for gliding over surfaces of an annulus fibrosis without snagging other tissues.

20. An apparatus for thermally treating at least one intervertebral disc, comprising:

(a) an energy application head having an energy application region and a tissue protecting region;

(b) a control member operationally connected to said energy application head, said control member suitable for controlling said energy application head during treatment of said at least one intervertebral disc;

(c) said energy application head further comprising a thin insertion edge at the anterior intersection of said energy application region and said tissue protecting region; and

(d) said tissue protecting region sloped to a thick region for lifting vulnerable tissues away from a site of energy application to said at least one intervertebral disc.

21. The apparatus of claim 20, wherein said energy application head is wedge-shaped.

22. The apparatus of claim 20, wherein said tissue protecting region has a domed center.

23. The apparatus of claim 20, wherein said energy application region has a smooth surface suitable for gliding over surfaces of an annulus fibrosis without snagging other tissues.

24. A method for epidurally treating at least one intervertebral disc using a disc refurbisher, said method comprising the steps of:

(a) gaining access to a vertebral column;

(b) inserting a thin insertion edge formed at the anterior portion of a circumferencial intersection between an energy application region

and a tissue protecting region of an energy application head of said disc refurbisher;

(c) epidurally approaching the posterior aspect of said at least one intervertebral disc;

(d) lifting vulnerable tissues using said tissue protecting region, said tissue protecting region being sloped from said thin insertion edge to a thick region; and

(e) applying energy to a posterior aspect of said at least one intervertebral disc using said energy application region.

25. A method for thermally treating an intervertebral disc while thermally protecting vulnerable tissues, said method comprising the steps of:

(a) providing a disc refurbisher, said disc refurbisher comprising:

(i) an energy application head having an energy application region and a tissue protecting region;

(ii) a thin insertion edge formed at the anterior portion of a circumferencial intersection between said energy application region and said tissue protecting region;

(iii) said tissue protecting region being sloped from said thin insertion edge to a thick region for lifting vulnerable tissues away from a site of energy application to said at least one intervertebral disc; and

(iv) a control member operationally connected to said energy application head, said control member suitable for controlling said energy application head during treatment of said intervertebral disc;

(b) gaining access to a vertebral column;

(c) epidurally approaching the posterior aspect of said at least one intervertebral disc using said control member to position said energy application head;

(d) evaluating an extent of disc injury and calculating an amount of energy needed to thermally refurbish said at least one intervertebral disc;

(e) applying energy using said disc refurbisher to a posterior aspect of said at least one intervertebral disc while maintaining a safe temperature in said vulnerable tissues near said at least one intervertebral disc;

(f) monitoring an amount of energy delivered and a temperature in said vulnerable tissues near said at least one intervertebral disc;

(g) observing and evaluating an amount of shrinkage and strengthening of said at least one intervertebral disc to determine an intensity and duration of further energy delivery; and

(h) verifying that said shrinkage and strengthening of said at least one intervertebral disc is mechanically successful.